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[STAFF WORKING DRAFT]

OCTOBER 31, 2003

108TH CONGRESS
1ST SESSION

S. ——

To establish a National Space Commission on activities of the United States related to the future of space.

IN THE SENATE OF THE UNITED STATES

OCTOBER ——, 2003

Mr. HOLLINGS (for himself, Mr. INOUYE, Mr. ROCKEFELLER, Mr. KERRY, Mr. BREAUX, Mr. DORGAN, and Mr. LAUTENBERG) introduced the following bill; which was read twice and referred to the Committee on ———————

A BILL

To establish a National Space Commission on activities of the United States related to the future of space.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''National Space Commission Act''.

SEC. 2. FINDINGS.

The Congress finds the following:

(1) Since the enactment of the National Aeronautics and Space Act of 1958, space has become increasingly important for science, public safety, national defense and intelligence gathering, commercial telecommunications and other Earth applications, and the advancement of international relations tied to the use of space for peaceful purposes.

(2) The recent loss of the Space Shuttle Columbia highlighted the true condition of space flight: that it is highly prone to risk, fundamentally challenges the laws of nature, is extremely unforgiving of lapses in judgment, and demands the utmost consideration of safety and the dignity of human life.

(3) The Columbia Accident Investigation Board expressed extreme misgivings about the management and technical culture of the National Aeronautics and Space Administration. In addition to prescribing a specific menu of recommendations, the Board expressed concerns that the agency may not be able to achieve its own reform, stating that, ''Based on NASA's history of ignoring external recommendations, or making improvements that atrophy with time, the Board has no confidence that the Space Shuttle can be safely operated for more than a few

years based solely on renewed post-accident vigilance''.

(4) Today, American astronauts and International Partner cosmonauts reside in space with limited means of safe rescue and support. The Nation remains dependent on the Space Shuttle as the sole means of International Space Station assembly and human operation in space for the foreseeable future. And the Nation faces a period of greatly increased expense merely to sustain current space operations.

(5) Even if new vehicle technologies were available, it is a matter of public discussion whether the historic ideals and prospects for the human exploration and development of space still guide our national program in space or whether the role and purpose of human presence in space has become ambiguous in light of other potential purposes for and uses of space.

(6) Meanwhile, our national program in space suffers from an aging space workforce and aging, sometimes dilapidated space facilities and systems, an atrophying of expertise, and a general lack of renewal of purposes, objectives, and methods. Commercial markets requiring space launch that are cru-

cial to establishing the firm economic basis for the development of space and for the commercial development of space technology have not emerged but have withered. Although the use of space for science and national security purposes is expanding, the economic and commercial development of space continues to be fledgling. Although the Nation stands on the doorstep of the permanent human habitation of space, a mature agenda for safe, economic operation in space necessary to broaden the Nation's participation and interest in the peaceful development of space is lacking.

(7) The Nation would benefit by establishing a permanent National Space Commission to advise the President and Congress on issues related to the reflight and future use of the Space Shuttle and on the possibilities for the future development and use of space, and to recommend measures the Nation should take to secure the safety of future space flight.

SEC. 3. NATIONAL SPACE COMMISSION.

(a) ESTABLISHMENT.—There is established a commission to be known as National Space Commission.

(b) MEMBERSHIP.—

(1) APPOINTMENT.—The Commission shall have 12 Members, who shall be appointed by the President by and with the advice and consent of the Senate.

(2) TERM.—Members of the Commission shall serve for a term of 5 years and shall be eligible for reappointment, except that the members initially appointed shall be appointed for terms of 3 years each.

(3) QUALIFICATIONS.—Members shall be selected from among individuals—

(A) with national reputations in the conduct of space flight and the development of space systems and technology;

(B) who are representative of the many views about the future of space and the economic and technical prospects for its use and development; and

(C) who are or have been employed in space-related activities, including—

(i) leaders of aerospace companies and other industries involved in the development and use of space;

(ii) professionals who have performed in significant capacities in the management of space programs or ventures; and

(iii) distinguished members of academia.

(4) VACANCIES.—Any vacancy occurring other than by the expiration of a term shall be filled in a manner that best replaces the qualifications of the person vacating the position, unless a person with different qualifications is to be nominated and appointed for the purpose of changing or re-directing the activities or objectives of the Commission.

(5) STATUS AS SPECIAL GOVERNMENT EMPLOYEES.—Members of the Commission are deemed to be special Government employees (as defined in section 202(a) of title 18, United States Code) without regard to the number of days of service during any 365-day period while engaged in the business of the Commission.

(6) TRAVEL EXPENSES.—Members of the Commission shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for employees of agencies under subchapter I of chapter 57 of title 5, United States Code, while away from their homes or regular places of business.

(c) CHAIR.—The President shall designate an individual to serve as Chair of the Commission for a term of 3 years, except that until the Commission has been in op-

eration for 3 full years the term of the individual so designated shall be 1 year. Any individual designated as chair is eligible for redesignation as Chair.

(d) MEETINGS.—The Commission shall meet at the call of the Chair. A majority of the members shall constitute a quorum, but a lesser number may conduct the business of the Commission.

(e) STAFF.—

(1) IN GENERAL.—The Commission shall appoint and fix the compensation (in accordance with the guidelines prescribed by the Administrator of General Services under section 7(d) of the Federal Advisory Committee Act) of staff comprising—

(A) staff selected by the Chair as permanent staff of the Commission; and

(B) staff selected by each Member as staff of the Member for the duration of the Member's appointment to the Commission.

(2) QUALIFICATIONS.—Staff shall be selected from among employees of business and professional firms in the business of the development of, manufacture and operation for, or use of space, individuals with entrepreneurial experience, employees of research centers and national laboratories, scholars, professionals, and academics whose work and in-

sights are such that their work in support of the Commission will enhance the Nation's ability to guide and direct the space program.

(3) DETAILING OF FEDERAL EMPLOYEES.—At the request of the Commission, the head of a Federal department or agency may assign an employee to serve as a member of the Commission staff while employed by the United States.

(4) EXPERTS AND CONSULTANTS.—

(A) IN GENERAL.—The Commission may obtain the services of experts and consultants in the private and nonprofit sectors in accordance with section 3109 of title 5, United States Code.

(B) AVAILABLE ARRANGEMENTS.—In obtaining any service described in subparagraph (A), the Commission may use any available grant, contract, cooperative agreement, or other arrangement authorized by law.

(C) NOTICE.—The Commission shall give public notice of any such grant, contract, cooperative agreement, or other arrangement before making any such grant or executing any such contract, cooperative agreement, or other arrangement.

SEC. 4. GENERAL DUTIES.

(a) IN GENERAL.—The Commission shall—

(1) provide advice and counsel to the President and the Congress of the United States on matters related to the future development and use of space;

(2) address questions of special merit posed by the President or by the Congress to be addressed by the Commission;

(3) conduct studies, assessments, and other methods of evaluation, including market, business, and financial assessments, necessary to reach conclusions and to formulate recommendations about the future of space;

(4) convene and establish public forums, reviews, and other means of public discourse for purposes of gathering and distributing information, facts, opinions, and data related to the future of space;

(5) confer with Federal, State, and local governments and regional organizations, United States corporations, laboratories, research centers and universities, and appropriate departments, agencies, and enterprises of other Nations on questions related to the development and use of space;

(6) make other recommendations as necessary to achieve the expanded development and use of

space, including assessments of the status, focus, and effectiveness of government and industry programs and efforts designed to achieve that purpose;

(7) propose and establish a National approach for the safety of space flight in support of commercial, military and civilian space and suborbital space programs, including issues related to the commercial licensing and operation of space vehicles, the regulation, management, and control of space flight parts, components, systems, and facilities, and the training and advancement of government and industry personnel necessary to achieve safe space flight; and

(8) advise the President and the Congress on any changes in Federal law or international agreements necessary to achieve the recommendations, solutions, and outcomes proposed by the Commission.

(b) METHODS OF SPACE FLIGHT.—In carrying out its duties under subsection (a), the Commission shall consider the potential for the future use of space by human and robotic means and the likely contribution of both to the long-term development and use of space.

(c) DISCLAIMER.—Nothing in this Act is intended—

(1) to prejudice the disposition, or outcome of decisions related to the ownership or institutional

operation and support, of Federal laboratories, centers, or bases; or

(2) to preclude the use of special classes, designs, or certification rules and standards peculiar to the use of military space vehicles.

SEC. 5. SPECIFIC REPORTS AND ADVISORY ACTIVITIES.

(a) SPACE SHUTTLE; INTERNATIONAL SPACE STATION.—

(1) IN GENERAL.—The Commission shall evaluate the findings, recommendations, and observations of the Columbia Accident Investigation Board and the activities of the National Aeronautics and Space Administration to respond to the Board's report, including issues related to the re-flight of the Space Shuttle, alternative near-term crewed vehicle options, and changes in the agency's organization, management, technical administration, and conduct of safety, operations and engineering, and training, and other changes intended to ensure the safety of space operations and the dignity of human life.

(2) CRITERIA FOR RETURN TO OPERATIONS.—The Commission shall make recommendations to the President and the Congress concerning—

(A) any additional criteria and conditions that the Commission considers critical for the

safe operation of the Space Shuttle that warrant demonstration during the initial and subsequent return-to-flight test and demonstration missions; and

(B) longer-term criteria and conditions necessary for a return to sustained operation and management of human space flight following the initial Space Shuttle re-flight and test and demonstration flights.

(3) EVALUATION OF HUMAN SPACE FLIGHT MANAGEMENT REFORMS.—The Commission shall assess—

(A) the capability of the National Aeronautic and Space Administration to resolve all findings, recommendations, and observations of the Columbia Accident Investigation Board to the Commission's satisfaction, including management and technical reforms necessary to achieve safe space flight;

(B) the relationship of the National Aeronautic and Space Administration to its industrial, scientific, and commercial partners and the proper role of each party in the selection, design, development, and operation of high risk space flight systems; and

(C) additional workforce, organization, and management reforms that may be required to enhance further the ability of the National Aeronautic and Space Administration, its partners, or other agencies of the United States to achieve safety of human space flight.

(4) CONSIDERATION OF THE INTERNATIONAL SPACE STATION AND ALTERNATIVE SPACE TRANSPORTATION SOLUTIONS.—In making its evaluation and recommendations under this subsection the Commission shall consider—

(A) the condition of the International Space Station along with the further risk to or security of human life resulting from any decision to accelerate or slow the return to assembly and operation of the International Space Station and sustained human space flight operations;

(B) alternative space vehicle and crewing options that meet the highest achievable standard of crew safety and security on-board the International Space Station in the shortest amount of time;

(C) the modification or purchase of existing space vehicles necessary to achieve a higher

standard of heightened crew safety or enhanced ability to conduct safe human space flight operations;

(D) the acquisition or development of crewed vehicles on a schedule significantly more aggressive that the proposed schedule of the Orbital Space Plane; and

(E) the contribution of any proposed vehicle options to purposes in space other than servicing and support of the International Space Station.

(4) REPORTS TO CONGRESS.—

(A) ALTERNATIVE MEANS OF CREW TRANSFER.—Within 3 months after the full Commission has taken office, it shall report to the President and the Congress on crewing options for the Space Shuttle during the period of assembly of the International Space Station, alternative interim use of available space vehicles for these operations, and alternative or accelerated United States crewed vehicle modification or development options in lieu of or in addition to the proposed Orbital Space Plane program.

(B) SPACE SHUTTLE RETURN-TO-FLIGHT.—

(i) PREFLIGHT ADVICE.—On a continuous basis from the initial return-to-flight mission of the Space Shuttle through the final such mission, the Commission shall advise the Administrator, the President, and the Congress of the results of its review and assessment of the Space Shuttle return-to-flight, including any additional criteria the Commission establishes for return-to-flight missions.

(ii) FINAL PREFLIGHT RECOMMENDATION.—Within 60 days before the planned date for the first Space Shuttle return-to-flight, and within 30 days before each subsequent test or demonstration flight of the Space Shuttle, the Commission shall transmit its final recommendations for return-to-flight to the Administrator, the President, and the Congress. In addition, the Commission shall attach to each such transmittal to the President and the Congress a record of its recommendations to the Administrator and a description of the Administrator's responses and actions in response to those recommendations.

(iii) POST-RESUMPTION ANALYSIS.—Within 6 months after the first successful return-to-flight mission of the Space Shuttle, the Commission shall submit a report to the President and the Congress summarizing the Commission's and the National Aeronautics and Space Administration's work on the re-flight of the Space Shuttle and addressing further changes that should be accomplished to ensure safe continuous operation of the Space Shuttle and the International Space Station. The report shall address the status of organizational, management, and technical changes in the National Aeronautics and Space Administration, their effectiveness in resolving concerns about the safety, operations, engineering, and management cultures of the agency, and their effectiveness in resolving concerns and risks associated with a return-to-normal operations for the Space Shuttle and the International Space Station.

(b) FUTURE LAUNCH TECHNOLOGY AND THE DEVELOPMENT OF AND USES FOR SPACE.—

(1) IN GENERAL.—The Commission shall—

(A) advise the President and the Congress on the state of the Nation's investment in and development of advanced space launch technology, including advanced space lift propulsion systems;

(B) make recommendations on steps necessary to accelerate the development of technologies and capabilities to advance the economy of space flight and the prospect for the expanded use of space for economic, commercial, and industrial purposes;

(C) assess how State and local governments and regional authorities might benefit from the expanded use of space;

(D) evaluate the ability of the Nation's private research centers, laboratories, and private and public universities to contribute to and benefit from the expanded development and use of space;

(E) assess the future use of space for exploration, science, research, national security, and public safety ensure that such uses are consistent with the long-term economic development of space, and are designed to enhance the

industrial and commercial capabilities of space flight whenever possible; and

(F) make detailed recommendations related to the use of budget, regulatory, and licensing powers and authorities of the United States to enhance, to better plan for, and to coordinate the activities of the United States related to the development and use of space.

(2) REPORT TO CONGRESS.—By September 1, 2005, the Commission shall transmit to the Congress a report that—

(A) summarizes its recommendations for future national goals for the development and use of space;

(B) provides a blueprint of capabilities that could and should be achieved by the end of the present decade, by 2015, and by 2025 in order to better position the Nation to achieve those goals; and

(C) addresses potential markets and uses for space and the means of financing the development and use of space.

(c) NATIONAL APPROACH TO THE SAFETY OF SPACE FLIGHT.—

(1) IN GENERAL.—The Commission shall conduct a review and assessment of the Nation's program of safety in space flight as conducted by the United States, the commercial space industry, and other private parties.

(2) CONTENTS.—The review and assessment shall—

(A) assess the current use of inspection, acceptance, and commercial licensing to certify the safety, flight worthiness, and flight readiness of space vehicles and their associated launch and ground control facilities;

(B) evaluate and compare current space launch and flight operations practices, including the promulgation of flight rules and over-flight plans of populated areas;

(C) assess and compare how Federal agencies, private launch operators, and commercial industry make determinations of flight worthiness and ground and flight system readiness, including the use of tests, analyses, demonstrations, and other means whereby the operational readiness of space vehicles, crew, and ground systems are verified to be ready for launch and operation;

(D) address current government and industry practices for conducting and coordinating design and decision rules within and among space management agencies, firms, organizations, and ground control and flight operations management centers before, during, and after flight; and

(E) assess practices and conditions related to the acquisition and sale of parts, components, systems, services, and capabilities among Industry prime and supplier contractors and the Federal Government, including outsourcing, sole source, and other competitive and non-competitive forms of relationship, and their impact upon safety.

(3) REPORT TO CONGRESS.—No later than September 1, 2005, the Commission shall transmit to the Congress a report that—

(A) summarizes the results of the review and assessment required by paragraph (1); and

(B) makes recommendations for a National program of—

(i) management of safe commercial, civil, and military space flight; and

(ii) regulation of the design, certification, or licensing of space flight systems for launch and landing over the United States, or for orbital or suborbital operation using crew or passengers aboard commercial or civil vehicles licensed or operated by the United States.

(c) ANNUAL REPORT.—In addition to other reports required or permitted under this Act, within 60 days after the end of each fiscal year, the Commission shall provide an annual report to the Congress that—

(1) summarizes its activities, reports, findings, conclusions, and recommendations during that fiscal year; and

(2) contains a year-end financial statement of the Commission's operations, including a detailed statement of the purposes for which funds have been expended by the Commission.

(d) OTHER REPORTS.—The Commission may also report to the President and the Congress on other space-related questions and issues raised by the Congress, the President, or on its own initiative.

SEC. 6. DEFINITIONS.

In this Act:

(1) ADMINISTRATOR.—The term ''Administrator'' means the Administrator of the National Aeronautics and Space Administration.

(2) COMMISSION.—The term ''Commission'' means the National Space Commission established by section 3.

SEC. 7. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Commission such sums as may be necessary to carry out its duties under this Act.

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